

Underground Construction (Tunneling)



U.S. Department of Labor
Occupational Safety and Health Administration

OSHA 3115
1996 (Revised)

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U.S. Department of Labor
Robert B. Reich, Secretary

Occupational Safety and Health Administration
Joseph A. Dear, Assistant Secretary

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1996 (Revised)

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Introduction

The existing OSHA regulation for underground construction (*Title 29 Code of Federal Regulations 1926.800*) was originally issued under the Construction Safety Act of 1969 as 29 CFR Part 1518. These regulations were adopted by OSHA in 1971 and redesignated as 29 CFR Part 1926.800, "Tunnels and Shafts." In 1974 and 1983, OSHA proposed revisions to the existing regulations in an effort to increase worker protection in underground construction activities. A new final rule issued on June 2, 1989, adds new protective measures and provides performance-oriented language to mitigate the hazards of underground construction.

Scope and Application

The final rule applies to the construction of underground tunnels, shafts, chambers, and passageways. It also applies to cut-and-cover excavations, both those physically connected to ongoing underground construction tunnels and those that create conditions characteristic of underground construction. These hazards include reduced natural ventilation and light, difficult and limited access and egress, exposure to air contaminants, fire, and explosion.

The 1994 Bureau of Labor Statistics (BLS) lost-time accident rate was 5.5 per 100 full-time workers for construction, 3.9 for mining, and 5.5 for manufacturing. In 1986, there were about 8,100 full-time employees involved in underground construction. According to OSHA estimates, this population sustained an average of 13.6 lost-time accidents for every 100 full-time workers, indicating a higher accident and injury rate than for other workers in the heavy construction industry.

Employers and employees in the 25 states that operate OSHA-approved workplace safety and health plans should check with their state agency concerning regulation of underground construction. Their state may be enforcing standards and other procedures that while "at least as effective as" federal standards, are not always identical to the federal requirements. See page 12 for more information on state plans.

Provisions of the Standard

This standard gives employers the flexibility to select from a variety of appropriate and effective methods of controlling workplace hazards in underground construction. The rule provides that employers must have certain actions taken by a "competent person."

In addition, employers are required to implement a safety program that focuses on instructing workers in topics relevant and appropriate to the specific jobsite.

Competent Person

A "competent person" is capable of identifying existing and predictable hazards in the workplace and is authorized to take prompt corrective measures to eliminate them (29 CFR 1926.32 (f)). Under Subpart S, Underground Construction, Caissons, Cofferdams, and Compressed Air, the competent person inspects and evaluates workplace conditions—e.g., pressure of air contaminants, ground stability, and the drilling, hauling and hoisting equipment—to ensure that any deficiencies are detected and corrected.

Safety Instruction

The standard requires that employees be taught to recognize and avoid hazards associated with underground construction. The instruction shall include the following topics, as appropriate for the jobsite:

- air monitoring,
- ventilation and illumination,
- communications,
- flood control,
- mechanical and personal protective equipment,
- explosives, fire prevention and protection; and
- emergency procedures—evacuation plans and check-in and check-out procedures.

Access and Egress

Under this provision, the employer must provide safe access to and egress from all work stations and must prevent any unauthorized entry underground. Completed or unused sections of an underground work area must be barricaded. Unused openings must be covered, fenced off, and posted with warning signs indicating "Keep Out" or other similar language.

Check-In/Check-Out

The employer is required to maintain a check-in/check-out procedure that ensures that aboveground personnel can determine an accurate count of the number of persons underground in the event of an emergency.

A check-in/check-out procedure is not required, however, when an underground construction designed for human occupancy is sufficiently completed so that permanent environmental controls are effective and when remaining construction activity will not cause an environmental hazard or result in structural failure.

At least one designated person is to be on duty aboveground whenever anyone is working underground. This person is also responsible for securing immediate aid for and keeping an accurate count of employees underground in case of an emergency.

Hazardous Classifications

The standard provides classification criteria for gassy or potentially gassy operations and identifies additional requirements for work in gassy operations.

Potentially Gassy Operations

Potentially gassy operations occur under either of the following circumstances:

- When air monitoring shows, for more than a 24-hour period, 10 percent or more of the lower explosive limit (LEL) for methane or other flammable gases measured at 12 inches (30.48 centimeters) \pm 0.25 inch (6.35 millimeters)

- from the roof, face, floor, or walls in any underground work area; or
- When the history of the geographical area or geological formation indicates that 10 percent or more of the LEL for methane or other flammable gases is likely to be encountered in the underground operation.

Gassy Operations

Gassy operations occur under the following conditions:

- When air monitoring shows, for 3 consecutive days, 10 percent or more of the LEL for methane or other flammable gases measured at 12 inches (30.48 centimeters) \pm 0.25 inch (6.35 millimeters) from the roof, face, floor, or walls in any underground work area; or
- When methane or other flammable gases emanating from the strata have ignited, indicating the presence of such gases; or
- When the underground operation is connected to a currently classified gassy underground work area and is subject to a continuous course of air containing a flammable gas concentration.

When a gassy operation exists, additional safety precautions are required. These include using more stringent ventilation requirements; using mobile diesel equipment only if it is approved for use in gassy operations; posting each entrance with warning signs; prohibiting smoking and collecting personal sources of ignition; maintaining a fire watch when hot work is performed; and suspending all operations in the affected area until all special requirements are met or the operation is declassified. Still allowed are operations related to the control of the gas concentrations; installation of new equipment or conversion of existing equipment; and installation of above-ground controls for reversing air-flow.

Air Monitoring

Additional air monitoring also is required during gassy conditions. Under the standard, the employer must have a competent person perform all air monitoring required to determine proper ventilation and quantitative measurements of potentially hazardous

gases. In instances where monitoring of airborne contaminants is required by the standard "as often as necessary," this individual is responsible for determining which substances to monitor and how frequently, taking into consideration factors such as jobsite location, geology, history, work practices, and conditions.

The atmosphere in all underground areas shall be tested quantitatively for carbon monoxide, nitrogen dioxide, hydrogen sulfide, and other toxic gases, dusts, vapors, mists, and fumes as often as necessary to ensure that prescribed limits (29 CFR 1926.55) are not exceeded. Quantitative tests for methane and other flammable gases shall also be performed to determine whether an operation is gassy or potentially gassy and to comply with other sections of the standard, i.e. [1] vii, viii, and ix.

A record of all air quality tests (including location, date, time, substances, and amount monitored) is to be kept aboveground at the worksite and shall be made available to the Secretary of Labor upon request.

Oxygen

Testing is to be performed as often as necessary to assure that the atmosphere at normal atmospheric pressure contains at least 19.5 percent oxygen, but not more than 22 percent.

Hydrogen Sulfide

When air monitoring indicates the presence of 5 parts per million (ppm) or more of hydrogen sulfide, testing is to be conducted in the affected underground work area at least at the beginning and midpoint of each shift until the concentration of hydrogen sulfide has been less than 5 ppm for 3 consecutive days. Continuous monitoring shall be performed when hydrogen sulfide is present above 10 ppm. Employees must be notified when the concentration of hydrogen sulfide is above 10 ppm. At concentrations of 20 ppm, an alarm (visual and aural) must signal to indicate that additional measures might be required (e.g., respirators, increased ventilation, evacuation) to maintain the exposure below the permissible exposure limit.

Other Precautions

When the competent person determines that contaminants that are dangerous to life may be present, the employer must post notices of the hazardous condition at all entrances to underground work areas and must ensure that the necessary precautions are taken.

In cases where 5 percent or more of the LEL for methane or other flammable gases is present, steps must be taken to increase ventilation air volume to reduce the concentration to less than 5 percent of the LEL (except when operating under gassy/potentially gassy requirements).

When 10 percent or more of the LEL for methane or other flammable gases is detected where welding, cutting, or other 'hot' work is being performed, work shall be suspended until the concentration is reduced to less than 10 percent of the LEL.

Where there is a 20 percent or more LEL, all employees shall be immediately withdrawn to a safe location aboveground, except those necessary to eliminate the hazard, and electrical power, except for acceptable pumping and ventilating equipment, shall be cut off to the endangered area until the concentration of the gas is less than 20 percent of the LEL.

Potentially gassy and gassy operations require additional air monitoring. These include testing for oxygen content in the affected work areas at least at the beginning and mid point of each work shift; using flammable gas monitoring equipment (continuous automatic when using rapid excavation machines; manual as needed to monitor prescribed limits); performing local gas tests prior to and continuously during any cutting, welding, or other hot work; testing continuously for flammable gas when employees are working underground using drill and blast methods and prior to reentry after blasting.

Ventilation

There are a number of requirements for ventilation in underground construction activities. In general, fresh air must be supplied to all underground work areas in sufficient amounts to prevent any dangerous or harmful accumulation of dusts, fumes, mists, vapors, or gases. A minimum of 200 cubic feet (5.7 cubic meters) of fresh air per minute is to be supplied for each employee underground. Me-

chanical ventilation, with reversible airflow, is to be provided in all of these work areas, except where natural ventilation is demonstrably sufficient. Where blasting or drilling is performed or other types of work operations that may cause harmful amounts of dust, fumes, or vapors, the velocity of airflow must be at least 30 feet (9.14 meters) per minute.

For gassy or potentially gassy operations, ventilation systems must meet additional requirements. For example, ventilation systems used during gassy operations also must have controls located aboveground for reversing airflow.

Illumination

As in all construction operations, the standard requires that proper illumination be provided during tunneling operations, as specified in 29 CFR 1926.56. When explosives are handled, only acceptable portable lighting equipment shall be used within 50 feet of any underground heading.

Fire Prevention and Control

In addition to the requirements of Subpart F, "Fire Protection and Prevention" (29 CFR 1926), open flames and fires are prohibited in all underground construction activities, except for hot work operations. Smoking may be allowed only in areas free of fire and explosion hazards, and the employer is required to post signs prohibiting smoking and open flames where these hazards exist. Various work practices are also identified as preventive measures. For example, there are limitations on the piping of diesel fuel from the surface to an underground location. Also, the pipe or hose system used to transfer fuel from the surface to the storage tank must remain empty except when transferring the fuel. Gasoline is not to be used, stored, or carried underground. Gasses such as acetylene, liquefied petroleum, and methylacetylene propadiene (stabilized) may be used underground only for hot work operations and only in accordance with Subpart J of 1926.800, paragraphs (j), (k), and (m). Leaks and spills of flammable or combustible fluids must be cleaned up immediately. The standard also requires fire prevention measures regarding fire-resistant barriers, fire-resistant hydraulic fluids, the location and storage of combustible materials near openings or access to underground operations, electrical installations underground, lighting fixtures, and fire extinguishers.

Hot Work

During hot work operations such as welding and cutting, noncombustible barriers must be installed below work being performed in or over a shaft or raise. As mentioned earlier, during these operations, only the amount of fuel gas and oxygen cylinders necessary to perform welding, cutting or other hot work over the next 24-hour period shall be kept underground. When work is completed, gas and oxygen cylinders shall be removed.

Cranes and Hoists

The final rule contains provisions applicable to hoisting that are unique to underground construction. The rule incorporates by reference 1925.550 with respect to cranes; 1926.550(g) with respect to crane-hoisting of personnel, except that the limitations in paragraph (g)(2) do not apply to the routine access of employees to the underground via a shaft. Section 1926.552(a) and (b) with respect to requirements for material hoists and 1926.552(a), (c) and (d) with respect to requirements of personnel hoists and elevators also apply. The final provisions for underground construction include the following:

- Securing or stacking materials and tools being raised or lowered in a way to prevent the load from shifting or snagging, or from falling into the shaft.
- Using a flashing warning light for employees at the shaft bottom and subsurface shaft entrances whenever a load is above these locations or is being moved in the shaft. However, this does not apply to fully enclosed hoistways.
- Following procedures for the proper lowering of loads when a hoistway is not fully enclosed and employees are at the shaft bottom.
- Informing and instructing employees of maintenance and repair work that is to commence in a shaft served by a cage, skip, or bucket.
- Providing warning signs saying that work is being performed. The signs are to be posted at the shaft collar, operator's station, and at each underground landing when work is being performed in the shaft.

- Using connections between the hoisting rope and cage or skip that are compatible with the wire rope used for hoisting.
- Using cage, skip and load connections that will not disengage from the force of the hoist pull, vibration, misalignment, release of lift force, or impact.
- Maintaining spin-type connections in a clean condition and protected from foreign matter that could affect their operation.
- Assuring that wire rope wedge sockets, when used, are properly seated and that once seated they will not escape.

Additional requirements for cranes include the use of limit switches. These operational aids are to be used only to limit travel of loads when operational controls malfunction and not as a substitute for other operational controls.

Emergencies

At work sites where 25 or more employees work underground at one time, employers are required to provide rescue teams or rescue services, that include at least two 5-person teams (one on the jobsite or within one-half hour travel time and one within 2 hours travel time). Where there are fewer than 25 employees underground at one time, the employer shall provide or make available in advance one 5-person rescue time on site or within one-half hour travel time.

Rescue team members have to be qualified in rescue procedures and in the use of firefighting equipment and breathing apparatus. Their qualifications must be reviewed at least annually. The employer must ensure that rescue teams are familiar with the jobsite conditions. Rescue team members are required to practice donning and using self-contained breathing apparatus on a monthly basis for jobsites where flammable or noxious gases are encountered or anticipated in hazardous quantities. As part of emergency procedures, the employer shall provide that self rescuers with respirators that have NIOSH and MSHA approval be available at underground work stations to all employees who might be trapped by smoke or gas. The selection, use, and care of respirators shall be in accordance with 1926.103(b) and (c).

A "designated," or authorized, person shall be responsible for securing immediate aid for workers and for keeping an accurate count of employees underground. This person's job must be such that his or her's ability to keep an accurate count of employees is reliable.

Emergency lighting, a portable hand or cap lamp, shall be provided to all underground workers in their work areas for emergency use unless natural light or an emergency lighting system provides adequate illumination for escape.

Recordkeeping

Under OSHA standards 29 CFR 1910.20, records of exposure to toxic substances and data analyses based on these records are to be kept for 30 years. Medical records are to be kept for at least the duration of employment plus 30 years. Background data for exposure records such as laboratory reports and work sheets need to be kept only for 1 year. Records of employees who have worked for less than 1 year need not be retained after employment, but the employer must provide these records to the employee upon termination of employment. First-aid records of one-time treatment need not be retained for any specified period.

Three months before disposing of records, employers must notify the Director of the National Institute for Occupational Safety and Health.

Hazard Communication

Under the provisions of the Hazard Communication standard (29 CFR 1926.50(g)), employers are responsible for informing employees of the hazards and the identities of chemicals they are exposed to when working. The standard covers both physical hazards (e.g., flammability) and health hazards (e.g., lung damage, cancer). Requirements of the rule include written hazard communication programs, labels and other forms of warning, availability of material safety data sheets, and employee information and training.

Other Sources of OSHA Assistance

Safety and Health Management Program Guidelines

Effective management of worker safety and health protection is a decisive factor in reducing the extent and severity of work-related injuries and illnesses and their related costs. To assist employers and employees in developing effective safety and health programs, OSHA published recommended *Safety and Health Program Management Guidelines* (*Federal Register* 54(18): 3908-3916, January 26, 1988). These voluntary guidelines apply to all places of employment covered by OSHA.

The guidelines identify four general elements that are critical to the development of a successful safety and health management program:

- Management commitment and employee involvement;
- Worksite analysis;
- Hazard prevention and control; and
- Safety and health training.

The guidelines recommend specific actions, under each of these general elements, to achieve an effective safety and health program. A single free copy of the guidelines can be obtained from U.S. Department of Labor, OSHA/OSHA Publications, P.O. Box 37535, Washington DC 20210 by sending a self-addressed mail label with your request.

State Programs

The *Occupational Safety and Health Act of 1970* encourages states to develop and operate their own job safety and health plans. States with plans approved under section 18(b) of the OSH Act must adopt standards and enforce requirements that are at least as effective as federal requirements. There are currently 25 state plan states and territories—23 covering both private and public (state and local government) employees and two covering public sector employees only. Plan states must adopt standards comparable (but not necessarily identical) to the federal within 6 months of a federal standard's promulgation. Until a state standard is promulgated, OSHA will provide interim enforcement assistance, as appropriate, in these states. A listing of states with approved plans appears at the end of this publication.

Free Onsite Consultation

Free onsite safety and health consultation services are available in all states to employers who want help in establishing and maintaining a safe and healthful workplace. Primarily developed for smaller employers with more hazardous operations, the OSHA Consultation Service is largely funded by OSHA and is delivered by state governments employing professional safety consultants and health consultants. The comprehensive assistance that is offered includes an appraisal of all mechanical systems, physical work practices, and environmental hazards of the workplace, and all aspects of the employer's present job safety and health program. In addition, the service offers assistance to employers in developing and implementing an effective workplace safety and health program that corrects and continuously addresses safety and health concerns.

This program is separate from OSHA's inspection efforts. No penalties are proposed or citations issued for any safety or health problems identified by the consultant. The service is confidential. The employer's name, the firm's name, and any information about the workplace, plus any unsafe or unhealthful working conditions that the consultant uncovers, will not be reported routinely to the OSHA inspection staff. The only obligation is the employer's commitment to correct serious job safety and health hazards in a timely manner. The employer is asked to make this commitment prior to the actual visit.

For more information on consultation services, see the list of state consultation projects at the end of this publication. Consultation Services

Voluntary Protection Programs

The Voluntary Protection Programs (VPP) are designed to recognize and promote effective safety and health program management. In the VPP, management, labor, and OSHA establish cooperative relationships at workplaces that have implemented strong programs. Sites approved for VPP's Star, Merit, and Demonstration programs have met, and must continue to meet, rigorous participation standards. Benefits of VPP participation include improved employee motivation to work safely, leading to better quality and productivity; lost workday case rates that generally are 60 percent to 80 percent below industry averages; reduced workers' compensation and other injury- and illness-related costs; positive community recognition and interaction; further improvement and revitalization of already good

safety and health programs; and partnership with OSHA. VPPs and onsite consultation services, when coupled with an effective enforcement program, expand worker protection to help meet the goals of the OSH Act.

For additional information about the VPP, contact the VPP Manager in your OSHA Regional Office, listed at the end of this publication.

Training and Education

OSHA's area offices offer a variety of informational services, such as publications, audiovisual aids, technical advice, and speakers for special engagements. OSHA's Training Institute in Des Plaines, IL, provides basic and advanced courses in safety and health for federal and state compliance officers, state consultants, federal agency personnel, and private sector employers, employees, and their representatives.

The OSHA Training Institute also has established OSHA Training Institute Education Centers to address the increased demand from the private sector and other federal agencies for its courses. These centers are nonprofit colleges, universities, and other organizations that have been selected after a competition for participation in the program.

OSHA also provides funds to nonprofit organizations, through grants, to conduct workplace training and education in subjects where OSHA believes there is a lack of workplace training. Grants are awarded annually. Grant recipients are expected to contribute 20 percent of the total grant cost.

For more information on grants, training, and education, contact the OSHA Training Institute, Office of Training and Education, 1555 Times Drive, Des Plaines, IL 60018, (847) 297-4810, FAX (847) 297-4874.

For further information on any OSHA program, contact your nearest OSHA area or regional office listed at the end of this publication.

Electronic Information

Labor News Bulletin Board—OSHA News releases, recent Federal Register notices, fact sheets, and other information are available by modem by dialing (202) 219-4784. Callers should set the modem at 300, 1,200, 2,400, 9,600, or 14,400 BAUD; Parity: None; Data Bits=8; Stop Bit-1. Voice phone (202) 219-8831.

Internet—OSHA standards, interpretations, directives, and additional information are now on the World Wide Web at <http://www.osha.gov/> and <http://www.osha-slc.gov/>.

CD-ROM—A wide variety of OSHA materials including standards, interpretations, directives, and more can be purchased on CD-ROM from the Government Printing Office. To order write to Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Specify *OSHA Regulations, Documents and Technical Information* on CD-ROM, (ORDT), S/N 729-013000000-5. The price is \$88 per year (\$110.00 foreign); single copy \$30.00 (\$37.50 foreign).

OSHA FAX—OSHA news releases, fact sheets, and other short documents are available by fax for a nominal charge of \$1.50 per minute. Callers should dial (900) 555-3400 to access the service.

Emergencies

For life-threatening situations, call (800) 321-OSHA. Complaints will go immediately to the nearest OSHA area or state office for help.

For further information on any OSHA program, contact your nearest OSHA area or regional office listed at the end of this publication.

OSHA Related Publications

A single, free copy of the following publications can be obtained from the U.S. Department of Labor, OSHA/OSHA Publications, P.O. Box 37535, Washington, DC 20013-7535, (202) 219-4667, FAX (202) 219-9266. Enclose a self-addressed mailing label with your request.

All About OSHA - OSHA 2056

OSHA Inspections - OSHA 2098

Excavating and Trenching Operations - OSHA 2226

Consultation Services for the Employer - OSHA 3047

Personal Protective Equipment - OSHA 3077

Respiratory Protection - OSHA 3079

Chemical Hazard Communication - OSHA 3084

The following publications are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, telephone (202) 512-1800, FAX (202) 512-2250. Include GPO Order No. and make checks payable to Superintendent of Documents. Visa or MasterCard are accepted.

Hazard Communication-A Compliance Kit (OSHA 3104), GPO order No. 929-016-00147-6. \$18.00 (\$22.00 foreign).

Hazard Communication - Guidelines for Compliance (OSHA 3111), Order No. 029-016-00127-1. \$1.00.

Construction Industry Digest - (OSHA 2202), Order No. 029-016-00151-4. \$2.25.

States with Approved Plans

Commissioner

Alaska Department of Labor
1111 West 8th Street
Room 306
Juneau, AK 99801
(907) 465-2700

Director

Industrial Commission
of Arizona
800 W. Washington
Phoenix, AZ 85007
(602) 542-5795

Director

California Department of
Industrial
Relations
45 Fremont Street
S. San Francisco, CA 94105
(415) 972-8835

Commissioner

Connecticut Department
of Labor
200 Folly Brook Boulevard
Wethersfield, CT 06109
(203) 566-5123

Director

Hawaii Department of Labor
and Industrial Relations
830 Punchbowl Street
Honolulu, HI 96813
(808) 586-8844

Commissioner

Indiana Department of Labor
State Office Building
402 West Washington Street
Room W195
Indianapolis, IN 46204
(317) 232-2378

Commissioner

Iowa Division of Labor Services
1000 E. Grand Avenue
Des Moines, IA 50319
(515) 281-3447

Secretary

Kentucky Labor Cabinet
1049 U.S. Highway, 127 South
Frankfort, KY 40601
(502) 564-3070

Commissioner

Maryland Division of Labor
and Industry
Department of Licensing
and Regulation
501 St. Paul Place, 2nd Floor
Baltimore, MD 21202-2272
(410) 333-4179

Director

Michigan Department of Labor
Victor Office Center
201 N. Washington Square
P.O. Box 30015
Lansing, MI 48933
(517) 373-9600

Director
Michigan Department of Public
Health
3423 North Logan Street
Box 30195
Lansing, MI 48909
(517) 335-8022

Commissioner
Minnesota Department of Labor
and Industry
443 Lafayette Road
St. Paul, MN 55155
(612) 296-2342

Administration
Nevada Division of Industrial
Relations
400 West King Street
Carson City, NV 97502
(702) 687-3032

Secretary
New Mexico Environmental
Department
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502
(505) 827-2850

Commissioner
New York Department of Labor
W. Averill Harriman
State Office Building - 12
Room 500
Albany, NY 12240
(518) 457-2741

Commissioner
North Carolina Department
of Labor
319 Chapanoke Road
Raleigh, NC 27603
(919) 662-4585

Administrator
Department of Consumer
and Business Services
Occupational Safety and Health
Division (OR-OSHA)
Oregon Dept. of Insurance
and Finance
Labor and Industries Building
Rm. 430
Salem, OR 97310
(503) 378-3272

Secretary
Puerto Rico Department
of Labor and Human
Resources
Prudencio Rivera Martinez
Building
505 Munoz Rivera Avenue
Hato Rey, PR 00918
(809) 754-2119

Director
South Carolina Department
of Labor,
Licensing and Regulation
3600 Forest Drive
P.O. Box 11329
Columbia, SC 29211-1329
(803) 734-9594

Commissioner
Tennessee Department of Labor
710 James Robertson Parkway
Nashville, TN 37243-0655
(615) 741-2582

Commissioner
Industrial Commission of Utah
160 East 300 South, 3rd Floor
P.O. Box 146600
Salt Lake City, UT 84114-6600
(801) 530-6898

Commissioner
Vermont Department of Labor
and Industry
National Life Bldg. Drawer 20
120 State Street
Montpelier, VT 05620
(802) 828-2288

Commissioner
Virgin Islands Department
of Labor
2131 Hospital Street, Box 890
Christiansted
St. Croix, VI 00820-4666
(809) 773-1994

Commissioner
Virginia Department of Labor
and Industry
Powers-Taylor Building
13 South 13th Street
Richmond, VA 23219
(804) 786-2377

Director
Washington Department
of Labor and Industries
P.O. Box 44000
Olympia, WA 98504-4000
(360) 902-4200

Safety Administrator
Workers' Safety, and Compen-
sation Div. (WSC)
Wyoming Dept. of Employment,
Herschler Building, 2nd Floor
East
122 West 25th Street
Cheyenne, WY 82002
(307) 777-7786

OSHA Consultation Project Directory

State	Telephone
Alabama	(205) 348-3033
Alaska	(907) 264-2599
Arizona	(602) 542-5795
Arkansas	(501) 682-4522
California	(415) 737-2843
Colorado	(303) 491-6151
Connecticut	(203) 566-4550
Delaware	(302) 577-3908
District of Columbia	(202) 576-6339
Florida	(904) 488-3044
Georgia	(404) 894-2646
Guam	(671) 646-9244
Hawaii	(808) 548-7510
Idaho	(208) 385-3283
Illinois	(312) 814-2339
Indiana	(317) 232-2688
Iowa	(515) 281-5352
Kansas	(913) 296-4386
Kentucky	(502) 564-6895
Louisiana	(504) 342-9601
Maine	(207) 624-6460
Maryland	(410) 333-4218
Massachusetts	(617) 727-3463
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Montana	(406) 444-6401
Nebraska	(402) 471-4717
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New Mexico	(505) 827-2885
New York	(518) 457-2481
North Carolina	(919) 733-3949
North Dakota	(701) 224-2348
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Oregon	(503) 378-3272
Pennsylvania	(412) 357-2561
Puerto Rico	(809) 754-2171
Rhode Island	(401) 277-2438
South Carolina	(803) 734-9599
South Dakota	(605) 688-4101
Tennessee	(615) 741-7036
Texas	(512) 440-3834
Utah	(801) 530-6868
Vermont	(802) 828-2765
Virginia	804) 367-1986
Virgin Islands	(809) 772-1315
Washington	(206) 586-0961
West Virginia	(304) 558-7890
Wisconsin	(608) 266-8579(H)
.....	(414) 521-5063(S)
Wyoming	(307) 777-7786

(H) - Health

(S) - Safety

OSHA Area Offices

Area	Telephone
Albany, NY	(518) 464-6742
Albuquerque, NM	(505) 766-3411
Allentown, PA	(215) 776-0592
Anchorage, AK	(907) 271-5152
Appleton, WI	(414) 734-4521
Augusta, ME	(207) 622-8417
Austin, TX	(512) 482-5783
Avenel, NJ	(908) 750-3270
Baltimore, MD	(410) 962-2840
Baton Rouge, LA	(504) 389-0474
Bayside, NY	(718) 279-9060
Bellevue, WA	(206) 553-7520
Billings, MT	(406) 657-6649
Birmingham, AL	(205) 731-1534
Bismarck, ND	(701) 250-4521
Boise, ID	(208) 334-1867
Bowmansville, NY	(716) 684-3891
Braintree, MA	(617) 565-6924
Bridgeport, CT	(203) 579-5579
Calumet City, IL	(708) 891-3800
Carson City, NV	(702) 885-6963
Charleston, WV	(304) 347-5937
Cincinnati, OH	(513) 841-4132
Cleveland, OH	(216) 522-3818
Columbia, SC	(803) 765-5904
Columbus, OH	(614) 469-5582
Concord, NH	(603) 225-1629
Corpus Christi, TX	(512) 884-2694
Dallas, TX	(214) 320-2400
Denver, CO	(303) 844-5285
Des Plaines, IL	(708) 803-4800
Des Moines, IA	(515) 284-4794
Englewood, CO	(303) 843-4500
Erie, PA	(814) 833-5758
Fort Lauderdale, FL	(305) 424-0242
Fort Worth, TX	(817) 885-7025
Frankfort, KY	(502) 227-7024
Harrisburg, PA	(717) 782-3902
Hartford, CT	(203) 240-3152

Hasbrouck Heights, NJ	(201) 288-1700
Hato Rey, PR	(809) 766-5457
Honolulu, HI	(808) 541-2685
Houston, TX	(713) 286-0583
Houston, TX	(713) 591-2438
Indianapolis, IN	(317) 226-7290
Jackson, MS	(601) 965-4606
Jacksonville, FL	(904) 232-2895
Kansas City, MO	(816) 426-2756
Lansing, MI	(517) 377-1892
Little Rock, AR	(501) 324-6291
Lubbock, TX	(806) 743-7681
Madison, WI	(608) 264-5388
Marlton, NJ	(609) 757-5181
Methuen, MA	(617) 565-8110
Milwaukee, WI	(414) 297-3315
Minneapolis, MN	(612) 348-1994
Mobile, AL	(205) 441-6131
Nashville, TN	(615) 781-5423
New York, NY	(212) 264-9840
Norfolk, VA	(804) 441-3820
North Aurora, IL	(708) 896-8700
Oklahoma City, OK	(405) 231-5351
Omaha, NE	(402) 221-3182
Parsippany, NJ	(201) 263-1003
Peoria, IL	(309) 671-7033
Philadelphia, PA	(215) 597-4955
Phoenix, AZ	(602) 640-2007
Pittsburgh, PA	(412) 644-2903
Portland, OR	(503) 326-2251
Providence, RI	(401) 528-4669
Raleigh, NC	(919) 856-4770
Salt Lake City, UT	(801) 524-5080
San Francisco, CA	(415) 744-7120
Savannah, GA	(912) 652-4393
Smyrna, GA	(404) 984-8700
Springfield, MA	(413) 785-0123
St. Louis, MO	(314) 425-4249
Syracuse, NY	(315) 451-0808
Tampa, FL	(813) 626-1177
Tarrytown, NY	(914) 682-6151
Toledo, OH	(419) 259-7542

Tucker, GA	(404) 493-6644
Westbury, NY	(516) 334-3344
Wichita, KS	(316) 269-6644
Wilkes-Barre, PA	(717) 826-6538

**U.S. Department of Labor
Occupational Safety and Health Administration
Regional Offices**

Region I

(CT,* MA, ME, NH, RI, VT*)

133 Portland Street

1st Floor

Boston, MA 02114

Telephone: (617) 565-7164

Region VI

(AR, LA, NM,* OK, TX)

525 Griffin Street

Room 602

Dallas, TX 75202

Telephone: (214) 767-4731

Region II

(NJ, NY,* PR,* VI*)

201 Varick Street

Room 670

New York, NY 10014

Telephone: (212) 337-2378

Region VII

(IA,* KS, MO, NE)

City Center Square

1100 Main Street, Suite 800

Kansas City, MO 64105

Telephone: (816) 426-5861

Region III

(DC, DE, MD,* PA, VA,* WV)

Gateway Building, Suite 2100

3535 Market Street

Philadelphia, PA 19104

Telephone: (215) 596-1201

Region VIII

(CO, MT, ND, SD, UT,* WY*)

Suite 1690

1999 Broadway

Denver, CO 80202-5716

Telephone: (303) 391-5858

Region IV

**(AL, FL, GA, KY,* MS, NC,
SC,* TN*)**

1375 Peachtree Street, N.E.

Suite 587

Atlanta, GA 30367

Telephone: (404) 347-3573

Region IX

(American Samoa, AZ,* CA,*

Guam, HI,* NV,* Trust

Territories of the Pacific)

71 Stevenson Street

Room 420

San Francisco, CA 94105

Telephone: (415) 744-6670

Region V

(IL, IN,* MI,* MN,* OH, WI)

230 South Dearborn Street

Room 3244

Chicago, IL 60604

Telephone: (312) 353-2220

Region X

(AK,* ID, OR,* WA*)

1111 Third Avenue

Suite 715

Seattle, WA 98101-3212

Telephone: (206) 553-5930

*These states and territories operate their own OSHA-approved job safety and health programs (Connecticut and New York plans cover public employees only). States with approved programs must have a standard that is identical to, or at least as effective as, the federal standard.